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A NEW FLAT FISH FROM NEW JERSEY.

BY HENRY W. FOWLER.

***Citharichthys micros* sp. nov.**

Head $3\frac{3}{8}$; depth $2\frac{1}{2}$; D. 67; A. 52; left P. 16; right P. 10; left V. 7; right V. 5; scales 43 in l. l. to caudal base; 11 scales above l. l. at depressed pectoral tip; 12 scales below l. l. at depressed pectoral tip; about same squamation on blind side also; snout tip to lower eye front about $5\frac{1}{4}$ in head, measured from upper jaw tip; eye $3\frac{3}{8}$; maxillary $3\frac{1}{2}$; longest dorsal rays about 2; longest anal rays about 2; least depth caudal peduncle $2\frac{2}{5}$; caudal length $1\frac{1}{5}$; left pectoral $1\frac{1}{3}$; right pectoral $2\frac{1}{8}$; interorbital about 6 in eye.

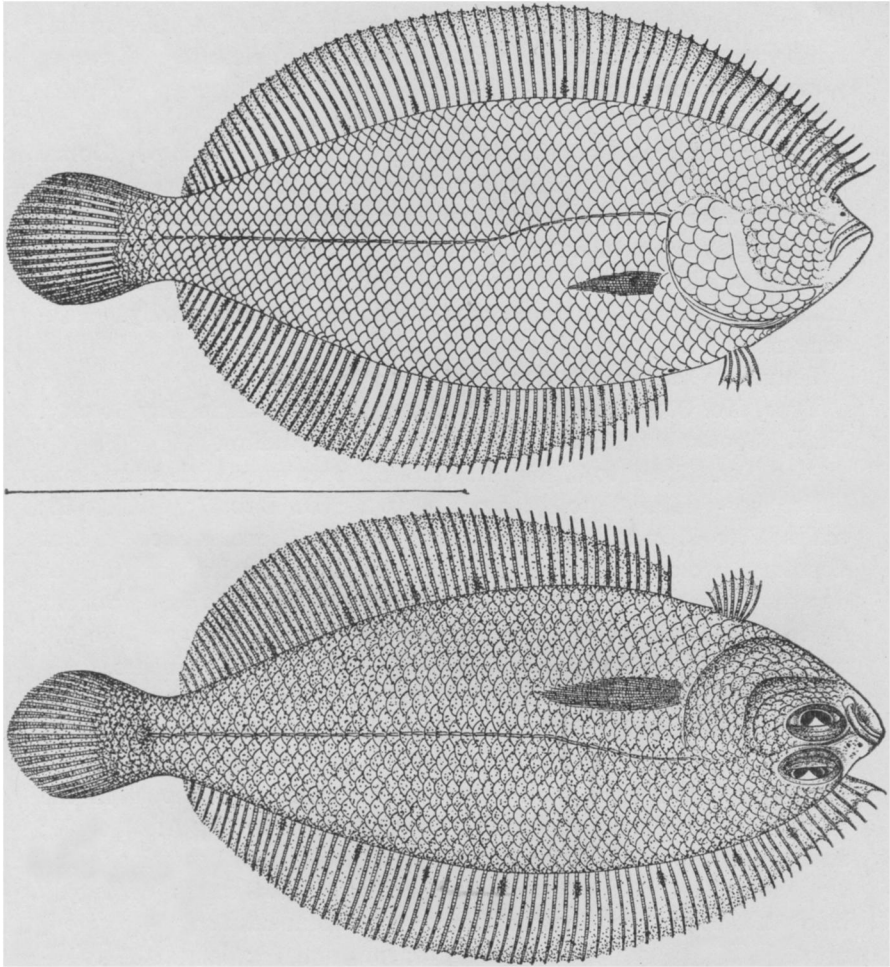
Body strongly compressed, thin, contour elongately ovoid, with greatest depth about opposite depressed pectoral tip. Caudal peduncle well compressed and only a little free.

Head moderate, greatly compressed, profiles similar or rather obtuse in front. Snout short, blunt. Eyes close together, only separated by narrow trenchant ridge, lower trifle large and but slightly extending before upper, its center about first third in head. Mouth small, inclined vertically, slightly curved. Lips fleshy, moderate. Maxillary bent a little, extends back trifle beyond front eye edge, though not to that of pupil, distal expansion about 4 in eye. Teeth in jaws uniserial, close-set, minute, slightly larger in front, sharp-pointed, conic, erect. No teeth on roof of mouth or tongue. Latter inconspicuous, fleshy, small, far back, end free. Mandible well protruded, rami well elevated inside mouth. Lower nostrils well separated, posterior over lower eye front and anterior a little before. Upper nostrils on front edge of snout well separated. Interorbital narrowly constricted. Preopercle ridge and edge slightly inclined forward.

Gill-opening forward about midway in head. Rakers 2 + 6 firm denticles, longest about $\frac{1}{3}$ of filaments, pointed, conic and apparently smooth. Filaments $1\frac{2}{5}$ in eye. Pseudobranchiæ a little less than filaments. Branchiostegals 4, membrane forming fold over isthmus. Latter truncate and trenchant in front, both sides constricted.

Scales rather small, cycloid, disposed in rather even longitudinal series parallel with l. l. on blind side, similar on upper side except some

on the trunk inconspicuously ctenoid. Apparently none of fins scaly basally except caudal, and on that fin scales small. Head scaly, except jaws, snout and maxillary. Scales on cheek in 6 rows. L. 1. complete, a trifle deflected anteriorly and then straight or median



Citharichthys micros Fowler.

along upper side, tubes simple and each one extending over entire exposure of scale.

Dorsal origin or base of first ray directly above front of lower eye, ends of anterior rays free, simple, and fin highest near last third in its

length. Anal well separated from ventral, its origin a little behind pectoral base, front rays free distally and simple, and fin highest near last third its length. Caudal elongate, rounded. Pectoral on left simple, upper median rays longest, its origin little below middle in body depth at that point. Right pectoral shorter, lower median rays longest, fin otherwise similar. Left ventral inserted a trifle behind right ventral, though former a little larger. Vent close to anal origin, presented on lower side.

Color in alcohol pale sandy-gray on upper side, with scattered inconspicuous areas or patches of slightly darker mottlings. Dorsal and anal pale grayish with dusky blotch basally about every five or six rays, intervening rays and membranes mottled with paler dusky. Caudal grayish with indistinct transverse pale dusky lines. Left pectoral similar. Lower side whitish and transparent, darker variations along dorsal, anal and caudal showing through distally. Peritoneum white.

Length $1\frac{1}{8}$ inches (47 mm.).

Type, No. 37,841, A. N. S. P. Corson's Inlet, Cape May County, N. J. September 17, 1910. Dr. Richard J. Phillips.

Also Nos. 37,842 to 37,850, A. N. S. P., paratypes with same data. These show: Head $3\frac{1}{2}$ to $3\frac{3}{4}$; depth $2\frac{1}{5}$ to $2\frac{2}{5}$; D. 62 to 67; A. 45 to 53; scales 37 to 43 in l. l. to caudal base; usually 11 scales above l. l. at depressed pectoral tip, frequently 10; usually 12 scales below l. l. at depressed pectoral tip, frequently 11; snout tip to lower eye front $4\frac{1}{8}$ to 5 in head measured from upper jaw tip; lower eye 3 to $3\frac{1}{2}$; maxillary 3 to $3\frac{1}{4}$; left pectoral $1\frac{1}{3}$ to $1\frac{2}{3}$; length $1\frac{1}{2}$ to $1\frac{3}{4}$ inches.

Two examples of *Citharichthys arctifrons*, kindly loaned by the United States National Museum through Mr. B. A. Bean, differ at once in their larger scales, their longer maxillary and more inclined upper profiles, besides such extent of variation as is shown in the following note. Head 4; depth $2\frac{1}{4}$ to $2\frac{3}{4}$; D. 74 or 75; A. 61 or 66; scales in l. l. to caudal base 36 to 38 + 2? to 4; about 8 scales (damaged) above l. l. at greatest depth of body; about 8 scales (damaged) below l. l. at greatest depth of body; snout 5 in head measured from upper jaw tip; eye $3\frac{2}{5}$; maxillary 3; pectoral $1\frac{1}{2}$; length $3\frac{1}{8}$ to $3\frac{3}{8}$ inches. These examples quite agree with Goode and Bean's figure,¹ and though in rather poor shape, all the important characters may be made out. They were secured off Martha's Vineyard, Mass., by the schooner Grampus, July 10, 1892. In pointing out the differences

¹ *Oceanic Ich.*, 1895, pl. 106, figs. 366a-b.

between the present species and *C. arctifrons*, it is only necessary to emphasize those above, though I also find it has much fewer gill-rakers, or about 2 + 6, while *C. arctifrons* shows 4 + 9. It seems, therefore, hardly likely my examples are the young of *C. arctifrons*, or *C. spilopterus*, of which I have West Indian material, or *C. unicornis*. These other species are readily distinguished; in the case of *C. spilopterus*, by its larger maxillary and smaller scales and in that of *C. unicornis* by the broad interorbital.

Found associated with *C. micros* were young *Prionotus carolinus*, *Brevoortia tyrannus*, *Trachinotus falcatus* and *Eucinostomus gula*, all of which were collected. Dr. Phillips noted on this occasion and the preceding day the greatest variety of species during the year. They were: *Mustelus mustelus*, *Eulamia milberti*, *Anguilla chrisypa*, *Anchovia mitchilli*, *Fundulus majalis*, *F. heteroclitus macrolepidotus*, *Tylosurus marinus*, *Syngnathus fuscus*, *Menidia menidia notata*, *Mugil cephalus*, *Pomatomus saltatrix*, *Centropristis striatus*, *Cynoscion regalis*, *Leiostomus xanthurus*, *Menticirrhus americanus*, *M. saxatilis*, *Sciænops ocellatus*, *Tautogolabrus adspersus*, *Tautoga onitis*, *Spheroides maculatus*, *Opsanus tau*, *Paralichthys dentatus* and *Pseudopleuronectes americanus*. An examination of the stomach contents of *C. micros* showed remains of small crustacea.

I may also note here that *Citharichthys spilopterus* Günther has been recorded from New Jersey by Jordan and Goss, a fact I had neglected to mention in my account of the fishes of that State.

(Μικρός, small.)